

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of all claims in the application.

### **Listing of Claims**

Claims 1-67. **(Canceled)**

Claim 68 **(Previously presented)**: A method of generating a base comprising the steps of:

- (a) providing a cation source in a cation source reservoir,
- (b) flowing an aqueous liquid stream through a first base generation chamber separated from said cation source reservoir by a first barrier substantially preventing liquid flow while providing a cation transport bridge, said first base generation chamber being pressurized, the pressure maintained in said first base generation chamber being at least about 2 times the pressure maintained in said cation source reservoir,
- (c) applying an electric potential between an anode in electrical communication with said cation source reservoir and a cathode in electrical communication with said first base generation chamber to electrolytically generate hydroxide ions in said first base generation chamber and to cause cations in said cation source reservoir to electromigrate toward said first barrier and to be transported across said first barrier toward said cathode to combine with said transported cations to form cation hydroxide, and
- (d) removing the cation hydroxide in an aqueous liquid stream as an effluent from said first base generation chamber.

Claim 69 **(Previously presented)**: A method of generating an acid comprising the steps of:

- (a) providing an anion source in an anion source reservoir,
- (b) flowing an aqueous liquid stream through a first acid generation chamber separated from said anion source reservoir by a first barrier substantially preventing liquid flow while providing an anion transport bridge, said first acid

generation chamber being pressurized, the pressure maintained in said first acid generation chamber being at least about 2 times the pressure maintained in said anion source reservoir,

(c) applying an electric potential between a cathode in electrical communication with said anion source reservoir and an anode in electrical communication with said first acid generation chamber to electrolytically generate hydronium ions in said first acid generation chamber and to cause anions in said anion source reservoir to electromigrate toward said first barrier and to be transported across said first barrier toward said anode to combine with said transported anions to form an acid, and

(d) removing the acid in an aqueous liquid stream as an effluent from said first acid generation chamber.

**Claim 70 (Previously presented):** A method of generating a base comprising the steps of:

(a) providing a cation source in a cation source reservoir,

(b) pumping an aqueous liquid stream through a first base generation chamber using a pump with an outlet disposed upstream of a first base generation chamber which is separated from said cation source reservoir by a first barrier substantially preventing liquid flow while providing a cation transport bridge, said first base generation chamber being pressurized by said pump and the pressure maintained in said base generation chamber is at least about 2 times the pressure maintained in said cation source reservoir,

(c) applying an electric potential between an anode in electrical communication with said cation source reservoir and a cathode in electrical communication with said first base generation chamber to electrolytically generate hydroxide ions in said first base generation chamber and to cause cations in said cation source reservoir to electromigrate toward said first barrier and to be transported across said first barrier toward said cathode to combine with said transported cations to form cation hydroxide, and

- (d) removing the cation hydroxide in an aqueous liquid stream as an effluent from said first base generation chamber.

**Claim 71 (Previously presented):** A method of generating an acid comprising the steps of:

- (a) providing an anion source in an anion source reservoir,
- (b) pumping an aqueous liquid stream through a first acid generation chamber using a pump with an outlet disposed upstream of a first acid generation chamber which is separated from said anion source reservoir by a first barrier substantially preventing liquid flow while providing an anion transport bridge, said first acid generation chamber being pressurized by said pump and the pressure maintained in said first acid generation chamber is at least about 2 times the pressure maintained in said anion source reservoir,
- (c) applying an electric potential between a cathode in electrical communication with said anion source reservoir and an anode in electrical communication with said first acid generation chamber to electrolytically generate hydronium ions in said first acid generation chamber and to cause anions in said anion source reservoir to electromigrate toward said first barrier and to be transported across said first barrier toward said anode to combine with said transported anions to form an acid, and
- (d) removing the acid in an aqueous liquid stream as an effluent from said first acid generation chamber.